

## Gunter, Jason

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**From:** Nations, Mark <mnations@doerun.com>  
**Sent:** Tuesday, July 15, 2014 4:53 PM  
**To:** Gunter, Jason  
**Cc:** Yingling, Mark; James, Kevin; Neaville, Chris; Montgomery, Michael;  
robert.hinkson@dnr.mo.gov; brandon.wiles@dnr.mo.gov; Ty Morris (TMorris@barr.com);  
Sanders, Amy B.; Hedrick, Samantha K.  
**Subject:** Leadwood June 2014 progress report  
**Attachments:** 2014-06-18 LW NPDES Pace Lab Report.pdf; LW\_06-14.doc

Jason, attached is the progress report.

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Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

June 26, 2014

Amy Sanders  
The Doe Run Company  
P. O. Box 500  
Viburnum, MO 65566

RE: Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

Dear Amy Sanders:

Enclosed are the analytical results for sample(s) received by the laboratory on June 19, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mary Jane Walls for  
Jamie Church  
jamie.church@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

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### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## SAMPLE SUMMARY

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60171826001	LEADWOOD 001	Water	06/18/14 10:15	06/19/14 08:30
60171826002	LEADWOOD 002	Water	06/18/14 09:39	06/19/14 08:30
60171826003	LEADWOOD UPSTREAM	Water	06/18/14 07:37	06/19/14 08:30
60171826004	LEADWOOD DOWNSTREAM	Water	06/18/14 07:53	06/19/14 08:30

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### SAMPLE ANALYTE COUNT

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60171826001	LEADWOOD 001	EPA 200.7	JGP	3	PASI-K
		SM 2540D	ESM	1	PASI-K
		SM 2540F	JML	1	PASI-K
		EPA 300.0	OL	1	PASI-K
60171826002	LEADWOOD 002	EPA 200.7	JGP	3	PASI-K
		SM 2540D	ESM	1	PASI-K
		SM 2540F	JML	1	PASI-K
		EPA 300.0	OL	1	PASI-K
60171826003	LEADWOOD UPSTREAM	EPA 200.7	JGP	6	PASI-K
		EPA 200.7	NDJ	3	PASI-K
		SM 2540D	ESM	1	PASI-K
		EPA 300.0	OL	1	PASI-K
60171826004	LEADWOOD DOWNSTREAM	EPA 200.7	JGP	6	PASI-K
		EPA 200.7	NDJ	3	PASI-K
		SM 2540D	ESM	1	PASI-K
		EPA 300.0	OL	1	PASI-K

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**ANALYTICAL RESULTS**

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

Sample: LEADWOOD 001 Lab ID: 60171826001 Collected: 06/18/14 10:15 Received: 06/19/14 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium	3.9J	ug/L	5.0	0.56	1	06/21/14 16:20	06/24/14 21:02	7440-43-9	
Lead	3.9J	ug/L	5.0	2.2	1	06/21/14 16:20	06/24/14 21:02	7439-92-1	
Zinc	3320	ug/L	50.0	12.5	1	06/21/14 16:20	06/24/14 21:02	7440-66-6	
<b>2540D Total Suspended Solids</b> Analytical Method: SM 2540D									
Total Suspended Solids	ND	mg/L	5.0	5.0	1		06/20/14 13:28		
<b>2540F Total Settleable Solids</b> Analytical Method: SM 2540F									
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		06/19/14 14:00		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Sulfate	369	mg/L	50.0	4.9	50		06/23/14 03:28	14808-79-8	

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## ANALYTICAL RESULTS

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

Sample: LEADWOOD 002		Lab ID: 60171826002		Collected: 06/18/14 09:39		Received: 06/19/14 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Cadmium	4.8J	ug/L	5.0	0.56	1	06/21/14 16:20	06/24/14 21:06	7440-43-9	
Lead	10.8	ug/L	5.0	2.2	1	06/21/14 16:20	06/24/14 21:06	7439-92-1	
Zinc	3720	ug/L	50.0	12.5	1	06/21/14 16:20	06/24/14 21:06	7440-66-6	
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	5.0	1		06/20/14 13:28		
<b>2540F Total Settleable Solids</b>		Analytical Method: SM 2540F							
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		06/19/14 14:00		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0							
Sulfate	452	mg/L	50.0	4.9	50		06/23/14 03:42	14808-79-8	

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## ANALYTICAL RESULTS

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

Sample: LEADWOOD UPSTREAM Lab ID: 60171826003 Collected: 06/18/14 07:37 Received: 06/19/14 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium	ND	ug/L	5.0	0.56	1	06/21/14 16:20	06/24/14 21:09	7440-43-9	
Calcium	43800	ug/L	100	7.8	1	06/21/14 16:20	06/24/14 21:09	7440-70-2	
Lead	2.7J	ug/L	5.0	2.2	1	06/21/14 16:20	06/24/14 21:09	7439-92-1	
Magnesium	25900	ug/L	50.0	17.0	1	06/21/14 16:20	06/24/14 21:09	7439-95-4	
Total Hardness by 2340B	216000	ug/L	500		1	06/21/14 16:20	06/24/14 21:09		
Zinc	ND	ug/L	50.0	12.5	1	06/21/14 16:20	06/24/14 21:09	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium, Dissolved	ND	ug/L	5.0	0.56	1	06/24/14 18:10	06/25/14 12:44	7440-43-9	
Lead, Dissolved	ND	ug/L	5.0	2.2	1	06/24/14 18:10	06/25/14 12:44	7439-92-1	
Zinc, Dissolved	ND	ug/L	50.0	12.5	1	06/24/14 18:10	06/25/14 12:44	7440-66-6	
<b>2540D Total Suspended Solids</b> Analytical Method: SM 2540D									
Total Suspended Solids	12.0	mg/L	5.0	5.0	1		06/20/14 13:28		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Sulfate	18.2	mg/L	2.0	0.20	2		06/23/14 03:57	14808-79-8	

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## ANALYTICAL RESULTS

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

Sample: **LEADWOOD** Lab ID: **60171826004** Collected: 06/18/14 07:53 Received: 06/19/14 08:30 Matrix: Water  
**DOWNSTREAM**

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium	ND	ug/L	5.0	0.56	1	06/21/14 16:20	06/24/14 21:13	7440-43-9	
Calcium	<b>47200</b>	ug/L	100	7.8	1	06/21/14 16:20	06/24/14 21:13	7440-70-2	
Lead	<b>4.0J</b>	ug/L	5.0	2.2	1	06/21/14 16:20	06/24/14 21:13	7439-92-1	
Magnesium	<b>27400</b>	ug/L	50.0	17.0	1	06/21/14 16:20	06/24/14 21:13	7439-95-4	
Zinc	<b>27.4J</b>	ug/L	50.0	12.5	1	06/21/14 16:20	06/24/14 21:13	7440-66-6	
Total Hardness by 2340B	<b>230000</b>	ug/L	500		1	06/21/14 16:20	06/24/14 21:13		
<b>200.7 Metals, Dissolved (LF)</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Cadmium, Dissolved	ND	ug/L	5.0	0.56	1	06/24/14 18:10	06/25/14 12:46	7440-43-9	
Lead, Dissolved	ND	ug/L	5.0	2.2	1	06/24/14 18:10	06/25/14 12:46	7439-92-1	
Zinc, Dissolved	ND	ug/L	50.0	12.5	1	06/24/14 18:10	06/25/14 12:46	7440-66-6	
<b>2540D Total Suspended Solids</b> Analytical Method: SM 2540D									
Total Suspended Solids	<b>6.0</b>	mg/L	5.0	5.0	1		06/20/14 13:29		
<b>300.0 IC Anions 28 Days</b> Analytical Method: EPA 300.0									
Sulfate	<b>29.7</b>	mg/L	2.0	0.20	2		06/23/14 04:11	14808-79-8	

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### QUALITY CONTROL DATA

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

QC Batch: MPRP/27731 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

METHOD BLANK: 1398298 Matrix: Water  
Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	ND	5.0	06/24/14 20:00	
Calcium	ug/L	ND	100	06/24/14 20:00	
Lead	ug/L	ND	5.0	06/24/14 20:00	
Magnesium	ug/L	ND	50.0	06/24/14 20:00	
Total Hardness by 2340B	ug/L	ND	500	06/24/14 20:00	
Zinc	ug/L	ND	50.0	06/24/14 20:00	

LABORATORY CONTROL SAMPLE: 1398299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	1000	989	99	85-115	
Calcium	ug/L	10000	9870	99	85-115	
Lead	ug/L	1000	1030	103	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Total Hardness by 2340B	ug/L		66400			
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1398300 1398301

Parameter	Units	60171821001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cadmium	ug/L	1.9J	1000	1000	1010	1020	101	101	70-130	1	10
Calcium	ug/L	278000	10000	10000	277000	288000	-3	103	70-130	4	9 M1
Lead	ug/L	3.6J	1000	1000	1000	1020	100	102	70-130	2	10
Magnesium	ug/L	83500	10000	10000	90400	94000	70	106	70-130	4	9
Total Hardness by 2340B	ug/L	104000			1060000	1110000				4	
Zinc	ug/L	10600	1000	1000	11300	11500	73	96	70-130	2	11

MATRIX SPIKE SAMPLE: 1398302

Parameter	Units	60171826004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	ND	1000	992	99	70-130	
Calcium	ug/L	47200	10000	57600	104	70-130	
Lead	ug/L	4.0J	1000	1040	104	70-130	
Magnesium	ug/L	27400	10000	37300	99	70-130	
Total Hardness by 2340B	ug/L	230000		297000			

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### QUALITY CONTROL DATA

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

MATRIX SPIKE SAMPLE:		1398302					
Parameter	Units	60171826004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Zinc	ug/L	27.4J	1000	1050	102	70-130	

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### QUALITY CONTROL DATA

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

QC Batch: MPRP/27791

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60171826003, 60171826004

METHOD BLANK: 1400395

Matrix: Water

Associated Lab Samples: 60171826003, 60171826004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	ND	5.0	06/25/14 12:24	
Lead, Dissolved	ug/L	ND	5.0	06/25/14 12:24	
Zinc, Dissolved	ug/L	ND	50.0	06/25/14 12:24	

LABORATORY CONTROL SAMPLE: 1400396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	1000	960	96	85-115	
Lead, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	968	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1400397 1400398

Parameter	Units	60171821002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cadmium, Dissolved	ug/L	ND	1000	1000	954	967	95	97	70-130	1	10
Lead, Dissolved	ug/L	ND	1000	1000	966	982	97	98	70-130	2	10
Zinc, Dissolved	ug/L	ND	1000	1000	937	950	94	95	70-130	1	11

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### QUALITY CONTROL DATA

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

QC Batch: WET/48586 Analysis Method: SM 2540D  
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids  
Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

METHOD BLANK: 1397881 Matrix: Water  
Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	06/20/14 13:26	

SAMPLE DUPLICATE: 1397882

Parameter	Units	60171818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3160	2560	21	10	D6

SAMPLE DUPLICATE: 1397883

Parameter	Units	60171826004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	6.0	0	10	

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### REPORT OF LABORATORY ANALYSIS

Date: 06/26/2014 09:44 PM

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## QUALITY CONTROL DATA

Project: NPDES MONTHLY (LEADWOOD)

Pace Project No.: 60171826

QC Batch: WETA/29934 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

METHOD BLANK: 1398939 Matrix: Water  
 Associated Lab Samples: 60171826001, 60171826002, 60171826003, 60171826004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	0.30J	1.0	06/22/14 16:54	

LABORATORY CONTROL SAMPLE: 1398940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1398941 1398942

Parameter	Units	60171254001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Sulfate	mg/L	25.4	10	10	35.5	35.5	101	101	80-120	0 15	

MATRIX SPIKE SAMPLE: 1398943

Parameter	Units	60171243003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	246	100	346	100	80-120	

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## QUALIFIERS

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-K Pace Analytical Services - Kansas City

### ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES MONTHLY (LEADWOOD)  
Pace Project No.: 60171826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60171826001	LEADWOOD 001	EPA 200.7	MPRP/27731	EPA 200.7	ICP/20973
60171826002	LEADWOOD 002	EPA 200.7	MPRP/27731	EPA 200.7	ICP/20973
60171826003	LEADWOOD UPSTREAM	EPA 200.7	MPRP/27731	EPA 200.7	ICP/20973
60171826004	LEADWOOD DOWNSTREAM	EPA 200.7	MPRP/27731	EPA 200.7	ICP/20973
60171826003	LEADWOOD UPSTREAM	EPA 200.7	MPRP/27791	EPA 200.7	ICP/21010
60171826004	LEADWOOD DOWNSTREAM	EPA 200.7	MPRP/27791	EPA 200.7	ICP/21010
60171826001	LEADWOOD 001	SM 2540D	WET/48586		
60171826002	LEADWOOD 002	SM 2540D	WET/48586		
60171826003	LEADWOOD UPSTREAM	SM 2540D	WET/48586		
60171826004	LEADWOOD DOWNSTREAM	SM 2540D	WET/48586		
60171826001	LEADWOOD 001	SM 2540F	WET/48558		
60171826002	LEADWOOD 002	SM 2540F	WET/48558		
60171826001	LEADWOOD 001	EPA 300.0	WETA/29934		
60171826002	LEADWOOD 002	EPA 300.0	WETA/29934		
60171826003	LEADWOOD UPSTREAM	EPA 300.0	WETA/29934		
60171826004	LEADWOOD DOWNSTREAM	EPA 300.0	WETA/29934		

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# Sample Condition Upon Receipt

NO#: 60171826



60171826

Client Name:

The Doe Run Company

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 723 4254 3625 Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☒ etc

Thermometer Used: T-239 / T-194

Type of Ice: Wet Blue None ☐ Samples received on ice, cooling process has begun, (circle one)

Cooler Temperature: 3-8

Data and initials of person examining contents: 04/11/14

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>SS</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>UT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 6/19/14



**THE  
DOE RUN  
COMPANY**

*Remediation Group*

**Mark Nations**  
**Mining Properties Manager**  
**[mnations@doerun.com](mailto:mnations@doerun.com)**

July 11, 2014

Mr. Jason Gunter  
Remedial Project Manager  
U.S. Environmental Protection Agency  
Region 7 - Superfund Branch  
11201 Renner Blvd.  
Lenexa, KS 66219

**Re: The Doe Run Company - Leadwood Mine Tailings Site Monthly Progress Report**

Dear Mr. Gunter:

As required by Article VI, Section 50 of the Unilateral Administrative Order (Docket No. CERCLA-07-2006-0272) for the referenced project and on behalf of The Doe Run Company, the progress report for the period June 1, 2014 through June 30, 2014 is enclosed. If you have any questions or comments, please call me at 573-518-0800.

Sincerely,



Mark Nations  
Mining Properties Manager

Enclosures

- c: Mark Yingling – TDRC (electronic only)
- Kevin James – TDRC (electronic only)
- Chris Neaville – TDRC (electronic only)
- Michael Montgomery – TDRC (electronic only)
- Robert Hinkson – MDNR
- Brandon Wiles – MDNR
- Ty Morris – Barr Engineering

**Leadwood Mine Tailings Site**  
Leadwood, Missouri  
**Removal Action - Monthly Progress Report**  
Period: June 1, 2014 – June 30, 2014

**1. Actions Performed or Completed This Period:**

- a. Work continued on the development of the Post Removal Site Control Plan for the site.
- b. Work continued on a long-term surface water management plan for the site.

**2. Data and Results Received This Period:**

- a. During this period, water samples were collected from downstream of Leadwood Dam and the East Seep and Erosion Area, as well as from upstream and downstream of the confluence of Eaton Creek with Big River. The analytical results for this event are included with this progress report.
- b. During this period, the Ambient Air Monitoring Report for June 2014 was completed. Any issues identified in this report are discussed below. A copy of this document has been sent to your attention.

**3. Scheduled Activities not Completed This Period:**

- a. None.

**4. Planned Activities for Next Period:**

- a. Finalize and submit the Post Removal Site Control Plan for the site.
- b. Finalize and submit the long-term surface water management plan for the site.
- c. Complete monthly water sampling activities as described in the Removal Action Work Plan.
- d. Complete air monitoring activities as described in the Removal Action Work Plan.

**5. Changes in Personnel:**

- a. None.

**6. Issues or Problems Arising This Period:**

- a. None.

**7. Resolution of Issues or Problems Arising This Period:**

- a. None.